



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/592,931	09/15/2006	Erwin Rutschmann	028987.57067US	5770
23122	7590	03/16/2010	EXAMINER	
RATNERPRESTIA			REESE, ROBERT T	
P.O. BOX 980				
VALLEY FORGE, PA 19482			ART UNIT	PAPER NUMBER
			3654	
			MAIL DATE	DELIVERY MODE
			03/16/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/592,931	RUTSCHMANN ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	ROBERT T. REESE	3654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 12/03/2009.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 7-9 and 11-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 7-9, 11-16 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/11/2009</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/3/2009, has been entered. Claims 7, 11, and 12 have been amended and claims 14-16 have been added. Claims 1-6 and 10 were cancelled in prior actions. Therefore, claims 7-9 and 11-16 are currently pending in the application.

### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 7, 8, 11, 12, 14, 15 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Baeumler (6,823,968) in view of Kitada et al. (4,815,419), in further view of Tanaka et al. (2003/014088).

As per claims 7 and 16, Baeumler discloses: an internal combustion engine having cylinder groups and using dry- sump-principle pressure lubrication (abstract), comprising: a crankcase having a dry-sump oil suction space (16) in a lower part thereof for collecting lubricant oil (figure 2); an oil return pump (Column 2, lines 24-25) that is configured to convey lubricant oil out of the dry-sump oil suction space, through an oil suction line (17); and a wet-sump oil supply container (18 and 20).

However, Baeumler does not disclose: an oil suction line connecting directly into an annular space arranged around cylinder groups, wherein the oil suction line of the oil return pump delivers lubricant oil directly into the annular space, and wherein the annular space is fluidly coupled to a vent connection that is exposed to the atmosphere for defoaming the lubricant oil collected within the annular space; and a wet-sump oil supply container that is fluidly coupled to the annular space for receiving defoamed lubricant oil from the annular space.

Kitada et al. discloses an engine cooling apparatus with an annular space (15) arranged around cylinder groups (depicted in figure 1), wherein the oil suction line (18) of the oil return pump delivers lubricant oil into the annular space (figure 1), and wherein the annular space is fluidly coupled to a vent connection (100) that is exposed to the atmosphere for defoaming the lubricant oil collected within the annular space (It is construed that the air in vent line 100 would be exposed to the atmosphere by passage through the crank case); and a wet-sump oil supply (5) container that is fluidly coupled to the annular space (through 23) for receiving defoamed lubricant oil from the annular space.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the oil collecting arrangement of Baeumler with the annular space and vent with the cylinder of Kitada et al. to use the oil as a cooling fluid around the cylinders and provide a discharge passage for air bubbles created in the oil foam.

Baeumler further does not disclose: a main delivery pump configured for conveying lubricant oil from the wet-sump oil supply container to consumers of the lubricant oil; and (Claim 7 only) wherein the wet-sump oil supply container is separate from the dry-sump oil suction space and is positioned to at least partially surround the dry-sump oil suction space, at least a portion of the wet-sump oil supply container being disposed at an elevation beneath the dry-sump oil suction space.

Tanaka et al. discloses a dry sump engine with a main delivery pump (20) configured for conveying lubricant oil from the wet-sump oil supply container (9) to consumers of the lubricant oil; and wherein the wet-sump oil supply container is separate from the dry-sump oil suction space (8) and is positioned to at least partially surround the dry-sump oil suction space, at least a portion of the wet-sump oil supply container being disposed at an elevation beneath the dry-sump oil suction space (depicted in figure 7).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the oil collecting arrangement of Baeumler with the main pump and dry sump/wet sump placement in the crank case as taught by Tanaka et al. to improve circulation of oil within the engine.

As per claim 8, Baeumler discloses that the engine is an opposed-cylinder engine (abstract).

As per claim 11, Baeumler discloses that the wet-sump oil supply container is integrated into the crank case.

As per claim 12, Baeumler discloses that the wet-sump oil supply container is integrated into the crank case so as to be separated from the dry sump oil section by one or more bulk heads (22 and 24).

As per claim 14, Tanaka et al. teaches that the main delivery pump is configured to convey lubricant oil to a cylinder head of the engine (paragraph 67- It is construed that the cylinder head would be included as one of the proper positions of the engine.).

As per claim 15, Baeumler discloses a suction pump (Column 2, lines 24-25). (It is construed that all pumps would require suction to operate. The requirement that the suction pump for delivering oil from the cylinder head of the engine directly into the annular space arranged around the cylinder group describes function and not structure of the apparatus, and as such is given little weight. See MPEP 2114).

4. Claims 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Baeumler (6,823,968), Kitada et al. (4,815,419), and Tanaka et al. (2003/014088), in further view of Udagawa (5,215,316).

As per claim 9 and 13, the combination of Baeumler, Kitada et al., and Tanaka et al. discloses all of the structural limitations of claim 7 above.

However, the combination of Baeumler, Kitada et al., and Tanaka et al. does not disclose: the annular space is open to a crank space (Claim 9) and is gasket sealed, or that the crankcase is of open deck configuration (Claim 13).

Udagawa discloses a metal laminate gasket (A, figure 3) for open deck type engines with a space that is open to a crank space (Figure 1), or that the crankcase is of open deck configuration (abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify oil collecting arrangement of the combination of Baeumler, Kitada et al., and Tanaka et al. with the gasket of Udagawa to securely seal the engine.

***Response to Arguments***

5. Applicant's arguments with respect to claims 7 and 16 have been considered but are moot in view of the new ground(s) of rejection. The Examiner wishes to point out that applying Kitada et al.'s annular space to Baeumler's cylinders would place the cylinders in a horizontal configuration, which is deemed to address the problems of oil circulation around the cylinders.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Stromsky et al. (6,578,541) discloses an internal-combustion engine. Tanaka et al. (6,889,651) discloses an engine and personal watercraft with an engine. Watanabe (7,240,657) discloses the lubrication system of an engine.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT T. REESE whose telephone number is (571) 270-5794. The examiner can normally be reached on M\_F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Q. Nguyen can be reached on (571) 272-6952. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3654

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Q. Nguyen/  
Supervisory Patent Examiner, Art Unit 3654

RTR